

Appendix F

King County Solid Waste Markets

APPENDIX F



Prepared for King County

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KING COUNTY SOLID WASTE MARKETS

This appendix describes the market status in King County for solid waste collection, transfer, and disposal, and assesses the degree of competition prevalent in these markets.

A. Market Status in King County

In King County, most refuse collection is by companies certificated by the Washington Utility and Transportation Commission (WUTC). This commission certifies companies to provide residential refuse collection and recycling services and commercial refuse collection services in specified geographic areas. Incorporated cities may choose to collect waste with municipal employees, as is done by such cities as Enumclaw and the Town of Skykomish, or to contract for waste collection, as is done by Seattle, Bellevue, Federal Way, Auburn, Kent, Algona, Renton, Des Moines, Bothell, Mercer Island, Issaquah, Snoqualmie, North Bend, Carnation, Duvall, Shoreline, Lake Forest Park, Kirkland, Pacifica, Tukwila, and Redmond.¹

If a community chooses municipal collection, rates are not set by the WUTC. If a community chooses to contract for collection services, rates are set by the community as it negotiates with bidders. When contracting for services, firms from outside the area are free to compete for the business. Seattle, for example, received bids from firms located in California in its most recent residential refuse collection procurement. The ability to attract solid waste collection service competitors requires that each have a competitive place to dispose of their loads at either a transfer station or disposal site. Previous discussions with private haulers located throughout the country indicate that entry to a new market is more likely if the contract is large (typically, at least 50,000 people) and the surrounding opportunities for other work are great – i.e. there is open competition for collection or many future contract opportunities.

In the course of the last ten plus years, consolidation in the collection industry in the County, largely achieved through acquisition of existing firms, has resulted in a market consisting of three firms: Allied (d/b/a Eastside Disposal, Kent-Meridian Disposal, Rabanco, SeaTac Disposal, Emerald City Disposal, and Rabanco Connections), Waste Management, Inc (d/b/a WM-Seattle, WM-Northwest, WM-Rainier, WM-Sno-King, WM-Federal Way Disposal, WM-RST Disposal, WM-Nick Raffo Garbage Company, and WM-Tri-Star Disposal), and Waste Connections, Inc., (d/b/a American Disposal). This is not an isolated occurrence; it follows a national trend towards concentration in the solid waste industry. Figure 1 displays the quantities of waste collected by each of these firms, by the two communities with municipal collection services, and by self haulers (residents and commercial entities). Almost 78% of all municipal solid waste in King County (including Seattle) is collected by just two firms – Allied and Waste Management, Inc. Less than one percent of the waste stream is collected by municipalities and Waste Connections.

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Self haulers account for over 20% of the waste collected in the County. Of course, the option to self haul would most likely no longer be available if all waste were brought to the transfer stations operated by the private firms, as these transfer stations do not easily accommodate small self haulers. Just two firms collect over 99% of all commercially collected waste in the County.

Figure 1: Market Concentration

Concentration in Collection and Transfer Markets for Solid Waste in King County								
MSW Tons 2002 <i>Rounded to nearest 100 tons</i>	Collected by:							
	Allied	Waste Management	Waste Connections	Self Haul	City of Enumclaw	Town of Skykomish	Total	% of Transfer
King County Transfer Stations (1)								
Algona	20,300	67,400	0	24,100	0	0	111,800	
Bow Lake	65,600	49,800	0	35,600	0	0	151,000	
Cedar Falls	0	0	0	4,200	0	0	4,200	
Enumclaw	1,100	12,100	0	12,800	5,100	0	31,100	
Factoria	44,900	20,500	0	29,000	0	0	94,400	
First NE	3,600	21,900	0	33,100	0	0	58,600	
Houghton	8,900	117,500	0	32,800	0	0	159,200	
Renton	8,300	32,100	0	15,700	0	0	56,100	
Skykomish	0	0	0	300	0	200	500	
Vashon	0	0	2,700	5,700	0	0	8,400	
SUBTOTAL	152,700	321,300	2,700	193,300	5,100	200	675,300	48.6%
City of Seattle (2)								
<i>North Transfer Station</i>								
Residential	17,400	27,400	0	0	0	0	44,800	
Commercial	31,700	100	0	0	0	0	31,800	
Self Haul	0	0	0	54,900	0	0	54,900	
Subtotal	49,100	27,500	0	54,900	0	0	131,500	
<i>South Transfer Station</i>								
Residential	69,900	27,600	0	0	0	0	97,500	
Commercial	42	8,200	0	0	0	0	8,200	
Self Haul	0	0	0	47,000	0	0	47,000	
Subtotal	69,900	35,800	0	47,000	0	0	152,700	
SUBTOTAL	119,000	63,300	0	101,900	0	0	284,200	20.4%
Private Transfer Stations								
<i>Eastmont (WMI)</i>								
King County	0	112,300	0	0	0	0	112,300	
Seattle (3)	0	65,800	0	0	0	0	65,800	
Subtotal	0	178,100	0	0	0	0	178,100	
<i>3rd and Lander (Allied)</i>								
King County	125,900	0	0	0	0	0	125,900	
Seattle (3)	112,400	0	0	0	0	0	112,400	
Subtotal	238,300	0	0	0	0	0	238,300	
SUBTOTAL	238,300	178,100	0	0	0	0	416,400	29.9%
King County – Cedar Hills Landfill (1)								
Direct	11,100	0	0	3,800	0	0	14,900	1.1%
TOTAL	521,100	562,700	2,700	299,000	5,100	200	1,390,800	100%
% of Total:	37.5%	40.4%	0.2%	21.5%	0.4%	0.01%	100%	
NOTES:								
(1) Planning level Data from King County Solid Waste Division								
(2) Seattle Public Utilities, Recycling and Disposal Station Report, 2002 Year End Summary								
(3) City of Seattle Garbage Tonnage Report, 2001-2002								

¹ The King County Solid Waste Division does not serve Seattle, although Seattle is included here because this is a discussion of the overall markets throughout the County.

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By any definition, the solid waste industry is highly concentrated, and the rates that are charged can be expected to be near monopolistic levels, unless the contracting and rate regulation policies of the WUTC are effective in prompting and enforcing efficient operations that result in more competitive prices for services. The WUTC employs a rate regulation scheme that sets the tariffs for particular services so that revenues are generated to cover approved costs plus the approved rate of return.

1. WUTC Regulations

In regulating solid waste tariffs, the WUTC reviews “approved costs,” that are determined from an examination of a firm’s income statement (which may or may not be audited). The WUTC then makes adjustments for certain factors, such as depreciation of capital equipment, and labor rates that may have changed during the year. This process results in an estimate of *pro forma* costs. These costs are compared to revenues (also adjusted, as necessary). If there is a gap between allowable costs and revenues, the firm is allowed a rate increase. Because the rate adjustment procedure is initiated by the hauler filing for a tariff change, the process usually does result in a rate increase.

The WUTC established rate of return is a function of the level of capital invested and the turnover of the capital. The operating ratio (total operating expenses divided by total operating revenue) resulting from these computations is generally around 90%. Although the methodology for computing the operating ratio is dependent on the magnitude of investment, the operating margin computed for each firm does not differ greatly across all firms.

The regulatory scheme is largely driven by the costs incurred by the collection companies – the larger the costs, the higher the allowed profits, other things being equal. The WUTC does not evaluate the efficiency of operations of the collection companies, or the extent to which prices paid for factors of production such as vehicles, labor, parts, etc. are optimally procured. These activities are beyond the scope of their duties. Additionally, these activities are not necessary if competition for customers keeps the firms operating at efficient operational levels.

While an assessment of whether the collection rates set by the WUTC are close to those that would be observed in a competitive market is beyond the scope of this analysis, it is clear that the rate setting process of the WUTC does not explicitly evaluate the efficiency of collection or transfer operations. Pressure to keep operations efficient arises less from the WUTC rate regulation methodology than from the ability of customers to “opt out” of the system by electing to self haul their refuse. Individual customers can opt out of the system, by choosing to self haul to the publicly operated transfer stations (and more than one in five tons is self hauled in the County). Cities can choose to contract for collection service, and they can encourage entry from

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firms not presently operating in the County. The transfer stations operated by King County thus provide not only conveniently located truck tipping alternatives, but they also provide a means to control collection prices. This important function is performed only by the public transfer stations (those operated by Seattle and King County). Private transfer stations in King County do not welcome self haulers. If the public sector were not to provide transfer, there might be a loss of the self haul alternative, and a consequent loss of the control this option places on collection prices

Finally, it should be noted that WUTC regulations result in just one certificated solid waste collection company for each regulated area in King County. Customers have no choice but to hire the certified hauler for collection services or to self haul.

2. King County Transfer and Disposal Rates

The WUTC does not directly regulate the rates charged for waste disposal. According to the WUTC regulations, firms may pass through charges for waste disposal at a facility designated by a local government; the firm may also include in its rate base charges incurred at an affiliated disposal or transfer site so long as such charges do not exceed “any other reasonable and currently available option.”²

King County operates the nine transfer stations listed in Exhibit 1, charging a fee of \$82.50 per ton at the gate. In 2002, approximately 670,880 tons were delivered to these transfer stations. County vehicles then deliver this waste to the Cedar Hills Landfill that is owned and operated by King County. As Figure 1 indicates, almost 70% of all the waste collected in King County, including waste collected in the City of Seattle, is delivered to publicly owned and operated transfer stations. Approximately 48% of the waste is delivered to King County transfer stations and 20% of the waste is deposited in Seattle transfer stations. The tip fee at the Seattle transfer stations is \$99.15 per ton for municipal solid waste delivered by collection companies in packer trucks.

Private transfer stations, owned and operated by subsidiaries of Allied and Waste Management, Inc., received 30% of the municipal solid waste in King County in 2002, charging County customers \$82.50 for these tons. Seattle tons are transferred pursuant to a contract between the collection companies and the City of Seattle, at a fee which covers transfer and transport to the rail head, but not rail haul or disposal. Waste from King County, excluding Seattle, that is deposited at one of the privately owned transfer stations must be delivered to the Cedar Hills Landfill, and the companies pay a fee that is \$23 per ton less than the tip fee at the King County

² Washington State Legislature, RCW81.77.160, Pass-through rates – Rules, (3).

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transfer stations. This waste, called Regional Direct, arrives at Cedar Hills in privately operated transfer trailers.³

Seattle tons received at the private transfer stations are largely commercial tons, that are delivered in rail containers to a Union Pacific railyard. From this site, the commercial tons from the private transfer stations and the residential tons from the City of Seattle operated transfer stations are dispatched in five weekly trainloads, each with approximately 100 28-ton containers, to the Columbia Ridge Landfill in Gilliam County, Oregon. This facility is owned and operated by Waste Management, Inc. In 2002, The City of Seattle paid a fee of \$43.70 per ton for rail transport and disposal of its commercial and residential waste.⁴

The fees charged at King County and City of Seattle transfer stations cover not only the cost of operating the transfer stations, transporting the waste to the landfills, and landfill disposal, but also the other activities of these two solid waste planning entities. These activities include preparation of Solid Waste Plans, education programs, funding landfill closure and post closure activities, and waste reduction and recycling programs. In 2002, for example, King County tip fee revenues funded \$6,860,000 in expenditures for Waste Reduction and Recycling and Planning and Communications. This amounted to approximately 9% of expenditures funded by tip fees. Such expenses are not borne by private firms operating transfer stations, yet the WUTC allows private transfer stations to charge the same rate as that charged by King County at its transfer stations.

After waste from King County arrives at the private transfer stations, they are required to transfer it and transport it to the County's Cedar Hills Landfill in large tractor trailer loads. The fee the private firms are charged at Cedar Hills for this waste is \$59.50; they can retain the \$23 per ton difference between this fee and the \$82.50 they charge at their stations. Logically, because private firms are pleased to deliver tons to their transfer stations at the rate that the public transfer station charges; the cost for transfer and transport at the private transfer stations must be less than the \$23/ton the County allows them for these activities. Private firms can deliver waste to their own transfer stations, charging rates determined by the price leadership of King County rather than by competitive market forces. The profits earned on these tons are not determined by competitive forces either.

³ Private garbage collection firms bring some waste that they collect in jurisdictions nearby directly to Cedar Hills. These tons are considered transfer tons, however, rather than regional direct, and haulers pay \$82.50 per ton to do this.

⁴ Seattle Public Utilities 2002 Financial Statement, p. 12.

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The WUTC, it should be noted, considers tip fees an element of approved costs, for dumpster and can customers.⁵ As such, they are included in the base on which allowable profits for collection services are computed. In other words, an integrated collection and transfer and disposal company can earn profits on its disposal activities and, again, charge profits to these same activities in the collection subsidiary. Disposal and transfer are thus doubly profitable activities for vertically integrated solid waste companies.

B. Indicators of Competition in Transfer and Disposal

1. Price Variation

In disposal, as indicated first by transfer station fees, there is little if any price variation in King County. Private firms universally charge the same rate as King County. As these private firms voluntarily go out of their way to take waste to their own transfer stations rather than to those operated by King County, it has to be more profitable for them to transfer this waste at their own stations (at \$23 per ton) than to deliver the waste to King County transfer stations.

There is strong comparative cost evidence that private transfer fees of \$23 per ton exceed the competitive level. A year 2000 examination of typical transfer station costs conducted by Ecodata found that per ton transfer costs in 14 communities nationally ranged from \$2.10 to \$15.22, with a mean of \$7.58.⁶ Transport costs in twelve instances were found to range from \$2.96 to \$27.07 per ton, with a mean of \$8.63, so total transfer and transport costs averaged \$16.31. These data support the logical conclusion that transfer and transport from Waste Management's Eastmont Transfer Station and Allied's 3rd and Lander Transfer Station to Cedar Hills Landfill cost less than \$23 per ton. Additional evidence is provided by the fact that the City of Seattle pays these firms \$7 to \$10 per ton to transfer waste and deliver it to the Union Pacific rail yard (a shorter transport distance than to Cedar Hills Landfill). If there were competition in the transfer and transport markets, prices charged at the private transfer stations would reflect the costs of operation. Costs at the private transfer stations are lower than prices charged by the County because they generally do not serve self haulers, and they do not have to pay for programmatic costs that the County does.

2. Service Variation

Services provided at transfer stations do not differ significantly from one station to the next, particularly regarding the receipt of garbage in collection trucks. All County-operated transfer

⁵ Disposal fees for drop box customers, whose containers are individually hauled to the transfer station and whose disposal fee is individually known, are passed through without a surcharge to the customer.

⁶ Communities included in the survey were Los Angeles, CA, San Francisco, CA, Seattle, WA, Tacoma, WA, Portland, OR, Palm Beach County, FL, and Hillsborough County, FL. All communities were assured that information provided would not identify any individual community.

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stations are currently open to self haulers and commercial haulers from at least 8:00 AM to 5:30 PM, 362 days a year. The Factoria Transfer Station is open weekdays from 6:15 AM to 11:30 PM. Waste Management's Eastmont Transfer Station is open weekdays from 6:00 AM to 6:00 PM and Saturday from 7:00 AM to 4:00 PM, and Allied's Third and Lander transfer station is open weekdays from 7:00 AM to 5:30 PM and Saturday from 8:00 AM to 3:30 PM. Both private transfer stations are open during the night to service their own collection vehicles. These hours largely accommodate the vehicles collecting Seattle's commercial garbage, that operated during the night.

The public sector transfer stations provide service to self haulers arriving in cars and other residential type vehicles. These services are not offered by the private sector transfer stations.⁷ If there were true competition for the self haulers, then the private sector stations would be providing this service as well. The public sector (City of Seattle and King County) provides self haulers access to the station, even though provision of service to this category of customer is more costly on a per ton basis, making the overall average cost of operating the transfer station higher than that of the all-truck private sector transfer stations.

3. Rates Charged

Over time, in a competitive market, prices vary according to changes in factor prices, demand, and services provided. Services provided in King County and Seattle have been relatively constant over time. Transfer and transport by truck to Cedar Hills Landfill has been consistently provided for over a decade by both the public and the private sectors.

Prices in King County and Seattle have remained relatively constant over the past decade. It is interesting to note that transfer station prices charged by Waste Management and Allied (or the companies that were subsequently acquired to become Waste Management and Allied) at one point used to differ, as reported to the WUTC. In 1994, for example, Allied (Seattle Disposal), reported fees of \$77.87 per ton at Rabanco Transfer Station, whereas Waste Management reported fees of \$74.89 for Seattle tons received at their Transfer Station. In 1995, this disparity in reported fees for transfer, transport, and disposal persisted, with Allied reporting a fee of \$77.89 per ton and Waste Management reporting a fee of \$73.63 per ton. By 1996, this indicator of competition between the two private transfer stations had disappeared; both firms reported a transfer station fee of \$77.89 per ton. Today, they each report identical fees of \$82.50 per ton for

⁷ The King County Comprehensive Solid Waste Management Plan (2000) on page 6-5 notes that Eastmont and 3rd and Lander receive commercial and demolition waste, petroleum-contaminated soils, and asbestos from their own vehicles and contractors, and that 3rd and Lander also receives yard wastes, asbestos and pre-sorted recyclables from its own vehicles and contractors. Generally, materials arriving at these facilities come in truck loads, rather than the automobiles received at the public transfer stations.

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municipal solid waste, as indicated previously. **Complete uniformity of prices, in a market with high levels of concentration, is another indicator of lack of competition.**

C. Summary of the Solid Waste Market Structure in King County

There are essentially two public sector and two private sector providers of solid waste transfer and disposal services in King County. King County is the most important participant in this market. Not only does King County handle more solid waste than any other participant, it also acts as the price setter for the private sector participants in the market.

As far as disposal sites are concerned, waste from King County presently goes to the landfill operated by the County, Cedar Hills. Seattle's waste goes by rail car to the Columbia Ridge Landfill owned and operated Waste Management. Seattle arrived at the price it pays as a result a negotiation with Waste Management. King County's rates are set to cover the costs of operating the facilities and providing other solid waste planning and recycling programs.

Collection in Seattle is pursuant to publicly procured contracts for residences and pursuant to negotiated contracts for commercial collection. In the rest of King County, many communities have chosen to contract with or franchise collection by Waste Management or Allied; the WUTC sets tariffs for collection by one of these two firms (there is just one collector available to residents of all parts of King County, excluding Seattle) using what amounts to a cost plus methodology. The only other collector is Waste Connections, providing contracted collection services to Vashon Island (less than 0.2% of the total waste stream).

In sum, there is little competition in either the collection or the disposal market in the King County/Seattle markets. Entry of firms is discouraged not only by the regulatory scheme, that makes entry impossible into the WUTC tariff areas, but also by the vertical integration of the two private sector firms. A firm from another market area is unlikely to enter to bid on one of the small contracts let by the incorporated cities within King County; entry is probable only in response to the large procurements for residential and commercial collection services issued by Seattle.

D. Assessment of Regional Marketplace

Solid waste collection in King County is highly concentrated – 78% of all waste, including that from Seattle, is collected by Allied and Waste Management. Rates are based on a variant of a cost plus method, or by negotiation between individual cities and the private sector haulers, or by public bidding procedures. Only Seattle is large enough to elicit outside entry in response to its procurements; the other customers of Allied and Waste Management must rely on rates set by the WUTC to approximate competitive market results. As indicated previously, in AppendixB,

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there is evidence that such rate regulation is a poor substitute for actual competition, and it is highly likely that collection rates in King County are at levels above the competitive equilibrium.

The present market for transport and disposal is again linked to the example of King County. It is the County's rates for transfer that establish rates throughout the County, at the private transfer stations or at those operated by King County itself. If King County got out of the disposal sector or the solid waste services industry, the County would be left with only the two firms capable of transporting garbage to landfills that they themselves own: Roosevelt owned by Allied and served by the Burlington Northern Railroad and Columbia Ridge owned by Waste Management and served by the Union Pacific Railroad. With no public sector operation to serve as the maximum allowable price, it is unlikely that the existing firms would actively compete to provide the competitive market price to County customers. Rather, it is likely that they would apply the monopolistic competition methodology, and offer services at prices as high as possible without encouraging market entry.

In sum, without a public sector presence in the disposal market, prices can be expected to trend upwards. An initial contract would be signed in an atmosphere in which the County would have an active knowledge of the costs of publicly provided disposal services. Over time, this knowledge would fade and become outdated, and the potential for price increases would rise. **For the long term economic benefit of the residents and business establishments of King County, the County should consider adopting policies that encourage and maintain competition in the solid waste disposal market.**